

CLAIMS

What is claimed is:

- 1 1. A method of communicating real time media data between a first client and a
2 second client, the method comprising:
 - 3 a) extracting a first client source network address from a first media
4 datagram originated by the first client;
 - 5 b) extracting a second client source network address from a second media
6 datagram originated by the second client;
 - 7 c) sending a third media datagram to the first client source network address,
8 wherein the third media datagram includes media data received from the second client;
9 and
 - 10 d) sending a fourth media datagram to the second client source network
11 address, wherein the fourth media datagram includes media data received from the first
12 client.
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1 2. The method of communicating real time media data of claim 1, wherein:
 - 2 a) the first client source network address comprises an Internet Protocol
3 address of a firewall server supporting the first client;
 - 4 b) the second client source network address comprises an Internet Protocol
5 address of a firewall server supporting the second client;
 - 6 c) the step of sending a third media datagram to the first client source
7 network address includes sending the third media datagram to a port number extracted
8 from the first media datagram; and
 - 9 d) the step of sending a fourth media datagram to the second client source
10 network address includes sending the fourth media datagram to a port number
11 extracted from the second media datagram.
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1 3. The method of communicating real time media data of claim 2, further including:

2 a) establishing a first port number for receipt of the first media datagram and
3 providing an indication of the first port number to the first client;

4 b) establishing a second port number for receipt of the second media
5 datagram and providing an indication of the second port number to the second client;
6 and wherein the third media datagram includes the first port number as a source port
7 number and the fourth media datagram includes the second port number as a source
8 port number.

1 4. The method of communicating real time media data of claim 3, wherein the first
2 port number and the second port number are the same.

1 5. The method of communicating real time media data of claim 1, further including:

2 a) establishing a first port number for receipt of the first media datagram and
3 providing an indication of the first port number to the first client;

4 b) establishing a second port number for receipt of the second media
5 datagram and providing an indication of the second port number to the second client;
6 and wherein the third media datagram includes the first port number as a source port
7 number and the fourth media datagram includes the second port number as a source
8 port number.

1 6. The method of communicating real time media data of claim 5, wherein the first
2 port number and the second port number are the same.

1 7. A method of communicating real time media data between a first client and a
2 second client, the method comprising:

3 a) receiving a first media data originated by the first client;

4 b) receiving a second media data originated by the second client;

5 c) receiving an indication of a first client network address;

d) comparing an Internet Protocol address of the first client network address to an Internet Protocol address of the first client source network address extracted from the first media datagram; and

e) sending a third media datagram that includes media data originated by the second client using the first client source network address as a destination network address of the third media datagram if the first client network address and the source network address are not the same.

8. The method of communicating real time media data of claim 7, wherein:

i) the first client source network address comprises an Internet Protocol address of a firewall server supporting the first client; and

ii) the step of sending a third media datagram includes sending the third media datagram to a port number extracted from the first media datagram.

9. The method of communicating real time media data of claim 8, further including establishing a first port number for receipt of the first media datagram and providing an indication of the first port number to the first client; and wherein the third media datagram includes the first port number as a source port number.

10. The method of communicating real time media data of claim 7, further including establishing a first port number for receipt of the first media datagram and providing an indication of the first port number to the first client; and wherein the third media datagram includes the first port number as a source port number.

11. The method of communicating real time media data of claim 7, further including sending a third media datagram that includes media data originated by the second client using the first client network address as a destination network address of the third media datagram if the first client network address and the first client source network address are the same.

12. The method of communicating real time media data of claim 11, wherein:

i) the first client source network address comprises an Internet Protocol address of a firewall server supporting the first client; and

ii) the step of sending a third media datagram includes sending the third media datagram to a port number extracted from the first media datagram.

13. The method of communicating real time media data of claim 12, further including establishing a first port number for receipt of the first media datagram and providing an indication of the first port number to the first client; and wherein the third media datagram includes the first port number as a source port number.

14. The method of communicating real time media data of claim 11, further including establishing a first port number for receipt of the first media datagram and providing an indication of the first port number to the first client; and wherein the third media datagram includes the first port number as a source port number.

15. A device for relaying real time media data between a first client and a second client, the device comprising:

a) a network interface circuit for communicating with each of the first client and the second client via a data network;

b) a media communication application operatively coupled to the network interface circuit for:

i) extracting a first client source network address from a media datagram originated by the first client and received by the network interface circuit;

ii) extracting a second client source network address from a media datagram originated by the second client and received by the network interface circuit;

13 iii) driving the network interface circuit to send a third media datagram
14 to the first client source network address, wherein the third media datagram
15 includes media data received from the second client; and

16 iii) driving the network interface circuit to send a fourth media
17 datagram to the second client source network address, wherein the fourth media
18 datagram includes media data received from the first client.

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1 16. The device for relaying real time media data between a first client and a second
2 client of claim 15, wherein:

3 i) the first client source network address comprises an Internet Protocol
4 address of a firewall server supporting the first client;

5 ii) the second client source network address comprises an Internet Protocol
6 address of a firewall server supporting the second client;

7 iii) the step of driving the network interface circuit to send a third media
8 datagram to the first client source network address includes sending the third media
9 datagram to a port number extracted from the first media datagram; and

10 iv) the step of driving the network interface circuit to send a fourth media
11 datagram to the second client source network address includes sending the fourth
12 media datagram to a port number extracted from the second media datagram.

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1 17. The device for relaying real time media data of claim 16, wherein the media data
2 application further provides for:

3 a) establishing a first port number for receipt of the first media datagram and
4 driving the network interface circuit to provide an indication of the first port number to
5 the first client;

6 b) establishing a second port number for receipt of the second media
7 datagram and driving the network interface circuit to provide an indication of the second
8 port number to the second client; and wherein the third media datagram includes the
9 first port number as a source port number and the fourth media datagram includes the
10 second port number as a source port number.

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1 18. The device for relaying real time media data of claim 17, wherein the first port
2 number and the second port number are the same.

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1 19. The device for relaying real time media data of claim 15, wherein the media data
2 application further provides for:

3 a) establishing a first port number for receipt of the first media datagram and
4 driving the network interface circuit to provide an indication of the first port number to
5 the first client;

6 b) establishing a second port number for receipt of the second media
7 datagram and driving the network interface circuit to provide an indication of the second
8 port number to the second client; and wherein the third media datagram includes the
9 first port number as a source port number and the fourth media datagram includes the
10 second port number as a source port number.

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1 20. The device for relaying real time media data of claim 19, wherein the first port
2 number and the second port number are the same.

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1 21. A device for relaying real time media data between a first client and a second
2 client, the device comprising:

3 a) a network interface circuit for communicating with each of the first client
4 and the second client via a data network;

5 b) a media communication application operatively coupled to the network
6 interface circuit for:

7 i) obtaining a first media datagram originated by the first client and
8 received by the network interface circuit;

9 ii) obtaining an indication of a first client network address for use as a
10 destination network address for sending media datagrams to the first client;

11 iii) obtaining a second media datagram originated by the second client
12 and received by the network interface circuit;

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13 iv) comparing the first client network address to a first client source
14 network address extracted from the first media datagram; and
15 v) driving the network interface circuit to send a third media datagram
16 that includes media data originated by the second client using the source
17 network address as a destination network address of the third media datagram if
18 the first client network address and the source network address are not the
19 same.
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1 22. The device for relaying real time media data between a first client and a second
2 client of claim 21, wherein:

3 i) the first client source network address comprises an Internet Protocol
4 address of a firewall server supporting the first client; and
5 iii) the step of driving the network interface circuit to send a third media
6 datagram to the first client source network address includes sending the third media
7 datagram to a port number extracted from the first media datagram.
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1 23. The device for relaying real time media data of claim 22, wherein the media data
2 application further provides for establishing a first port number for receipt of the first
3 media datagram and driving the network interface circuit to provide an indication of the
4 first port number to the first client and wherein the third media datagram includes the
5 first port number as a source port number.
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1 24. The device for relaying real time media data of claim 21, wherein the media data
2 application further provides for establishing a first port number for receipt of the first
3 media datagram and driving the network interface circuit to provide an indication of the
4 first port number to the first client and wherein the third media datagram includes the
5 first port number as a source port number.
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1 25. The device for relaying real time media data between a first client and a second
2 client of claim 21, wherein the media data application further provides for driving the

network interface circuit to send a third media datagram that includes media data originated by the second client using the first client network receiving address as a destination network address of the third media datagram if the first client network address and the source network address are the same.

26. The device for relaying real time media data between a first client and a second client of claim 25, wherein:

i) the first client source network address comprises an Internet Protocol address of a firewall server supporting the first client; and

iii) the step of driving the network interface circuit to send a third media datagram to the first client source network address includes sending the third media datagram to a port number extracted from the first media datagram.

27. The device for relaying real time media data of claim 26, wherein the media data application further provides for establishing a first port number for receipt of the first media datagram and driving the network interface circuit to provide an indication of the first port number to the first client and wherein the third media datagram includes the first port number as a source port number.

28. The device for relaying real time media data of claim 25, wherein the media data application further provides for establishing a first port number for receipt of the first media datagram and driving the network interface circuit to provide an indication of the first port number to the first client and wherein the third media datagram includes the first port number as a source port number.